

WILDERNESS EVALUATION

BODIE MOUNTAIN - 608002

8,408 acres

(3,890 acres - Okanogan–Wenatchee National Forest)

(4,518 acres - Colville National Forest)

OVERVIEW

History

The Bodie Mountain Potential Wilderness Area (PWA) was originally inventoried as roadless during RARE II. The RARE II process did not recommend the area for wilderness designation. The 2006 inventory removed approximately 194 acres from previous inventory due to road construction and logging; 2,185 acres were added to the previous inventory as they meet the criteria for a potential wilderness area as described in Forest Service Handbook (FSH) 1909.12, Chapter 70. The following chart depicts the land and resource management plan allocations for the 2006 potential wilderness area.

Table 1--Management area percentages (rounded)

Colville					Okanogan
MA1 Old Growth Dependent Species Habitat	MA3B Recreation/ Wildlife	MA5 Scenic Timber	MA6 Scenic/ Winter Range	MA7 Wood/ Forage	MA24 Mineral Exploration
8%	11%	9%	1%	25%	46%

Location and Access

The Bodie PWA lies within T. 39 N., R. 31 E., Okanogan County, Washington. It is located in the northeast portion of the Okanogan-Wenatchee National Forest, and the northwest portion of the Colville National Forest. This PWA lies directly east of Toroda Creek and can be viewed from County Road 9595. There is no national forest access road within Okanogan County. While this PWA is adjoined by private lands on the west side, the area is accessible from Colville National Forest lands within Ferry County via Road 2148.

Geography and Topography

Topography ranges from steep lower slopes along Toroda Creek to rounded rocky upper slopes and rolling, broken ridge tops (all typical of the Okanogan Highlands Geologic Province). Elevations range from approximately 3,000 to over 4,500 feet. The Bodie Mountain area has rocky, barren ridges, and timbered draws.

Current Uses

The entire area is annually grazed by livestock from June through September. Recreational use of the area is low, and primarily by hunters. The Curlew Job Corps Center uses the area to provide recreational opportunities and an outdoor classroom.

Appearance and Surroundings

The area appears as rugged, undeveloped terrain from the Toroda Creek Road. The ridges are barren and rocky separated only by the forested draws: Harvey Creek and O'Connor Creek. The area is surrounded by private livestock pasture and farming lands.

Key Attractions

The hike to the summit of Bodie Mountain and the opportunity for hunting provide the primary attractions.

CAPABILITY FOR WILDERNESS

Level of Natural and Undeveloped Environment

The Bodie Mountain PWA is small in size and adjoined by private land; therefore, farming activity can be seen and heard and roads are visible with audible traffic noise from portions of the area. Administrative fire exclusion has affected the natural ecosystem cycles and has resulted in overstocked tree conditions with declining health.

The area has not been significantly modified by humans and, in general, is natural-appearing other than some small harvest units on the eastern boundary; however, livestock grazing is obvious during the months of June through September throughout the area, and there are several short drift fences, eleven water developments, and two old roads. These roads have not been maintained, and they are not National Forest System roads.

Water quality data is not available for the PWA; however, due to the relatively low level disturbance water quality is assumed to be high. There may be localized disturbances due to grazing activities.

Musk thistle, a noxious weed, is established on seven acres within the PWA.

The Bodie Mountain PWA is partially impaired by light pollution from the Midway and Grand Forks area. The northeastern tip of the area (25 percent of the PWA) rates a Class 3 on the Bortle Scale, and the remaining portion (75 percent of the PWA) rates as a Class 2. A Class 3 Rural Sky has some indication of light pollution on the horizon. Clouds may appear faintly illuminated in the brightest parts of the sky near the horizon, but are dark overhead. The Milky Way still appears complex. Visual observing is still relatively unimpaired. A Class 2 Typical Truly Dark Sky represents the darkest skies viewed in the continental United States. The summer Milky Way is highly structured to the unaided eye. Any clouds in the sky are visible only as dark holes or voids in the starry background.

Outstanding Opportunities for Solitude or Primitive and Unconfined Recreation

Due to its small size and proximity to private farmland and open roads, there is little opportunity for challenging experiences or a sense of remoteness. However, because the area has limited access and receives low use, there are good opportunities for solitude.

Special Features

The area is within the lynx secondary recovery area and provides source habitat for wolverine and American marten. The lynx and wolverine have very limited distribution in the region.

Manageability of Boundaries

The area is quite small compared to most wilderness areas in the western United States. Width varies from only a mile on the north side of the PWA to not quite three miles at its widest point. With private landowners on the western half of the area, any sort of development could possibly occur up to the boundaries of the potential wilderness area that could hinder retaining primeval characteristics such as a quiet, natural-appearing environment. Because of the surveyed private property boundaries, the perimeter of the PWA would be fairly easy to locate. However, it also offers the opportunity for nonconforming uses to enter the area as described below in the recreation section. The eastern boundary is not along a prominent feature, so would be difficult to locate and manage.

AVAILABILITY FOR WILDERNESS

Recreation

There are no special recreation features available. There are no system trails in the area; however, there is one trail maintained by users and allotment permittees along the ridge to Bodie Mountain. Current recreation use is low as there are no obvious destinations such as lakes or fishing streams. Private land on the western half limits access to the area for recreational use and development. Because demand is low in this area, and there are no unique key attractions, trails have not been constructed and recreation opportunities have not been highlighted. There are at least two old roads originating on private properties near Toroda Creek that can be accessed with all-terrain vehicles; however, the forest has no legal access through these private properties. The only people using these old roads are those associated with the private land, or those who cross the private land with or without appropriate permission. Good mule deer hunting and a user-maintained trail to Bodie Mountain are the primary attractions for visitors.

Table 2--Miles of recreation trails

Motorized Trails	Non-motorized Trails	Snowmobile Trails
0	0	0

Wildlife

The Bodie Lynx Analysis Unit lies partially within this potential wilderness area. Although this area does not provide expansive security habitat for wide-ranging carnivores such as grizzly bears, gray wolves, or wolverines, it does provide connectivity between better-suited habitats. This potential wilderness area lies approximately 35 miles to the east of the North Cascades Grizzly Bear Recovery Zone and approximately 65 miles to the west of the Selkirk Grizzly Bear Recovery Zone.

The PWAs provide varying levels of habitat for focal wildlife species. To help evaluate the habitat that these areas provide, the following information was provided: the focal species emphasized in the area, the amount of habitat for each focal species, the priority ranking for the habitat (based on conservation assessments and recovery plans), and the proportion of the total habitat available on the forest that is within this particular PWA.

Table 3--Availability of habitat for federally listed Threatened and Endangered wildlife species, and R6 focal species

Wildlife Species	Acres of Habitat	Habitat Priority Ranking (1=high, 2=mod., 3=low)	%Total Forest Habitat in Evaluation Area
American marten	143	3	<1
Canada lynx	42	2	<1
Wolverine	5038	3	<1

Water/Fish

Both Harvey and O'Connor Creeks are 'Class 4' perennial streams with no known fish populations.

The area contains several intermittent and perennial streams that drain directly into Toroda Creek. Toroda Creek is important to local residents for domestic, irrigation, and stock water use. Water quality is currently sufficient for all these uses. Harvey Creek and O'Conner Canyon Creek are considered to be perennial streams, but they do not contribute significant water flows to Toroda Creek. There are no known fish populations present. Water from the area eventually drains into the Kettle River.

There are no power withdrawals or known Federal Energy Regulatory Commission projects licensed or under consideration.

Range

The Okanogan-Wenatchee National Forest portion of the area contains two cattle allotments (Toroda and Sheridan). The Toroda Allotment lies north of Harvey Creek. The Sheridan Allotment lies south of Harvey Creek. The Colville National Forest portion of the area contains a portion of the Toroda and Sheridan Cattle Allotments (administered by the Okanogan-Wenatchee National Forest) and the Tonata Cattle Allotment. A fence is within the potential wilderness area and follows the ridgeline that separates the Tonata Allotment from the Toroda and Sheridan Cattle Allotments. There are eleven water developments

within the PWA. The range permittees currently use both horses and motorized equipment to access stock developments and maintain fences and other range improvements.

Table 4--Grazing suitability and current allotments

Percent Area Suitable for Cattle Grazing	Percent Area Currently in Cattle Allotments	Percent Area Suitable for Sheep Grazing	Percent Area Currently in Sheep Allotments
15	100	32	0

Vegetation and Ecology

Because of the dry forest groups, acreages of wildland urban interface, and the need to suppress wildfires due to proximity of private land, there is a need to treat fuels and vegetation. The Healthy Forest Restoration Act (HFRA) authorizes direction to implement fuel reduction projects in the wildland urban interface (WUI). The HFRA prohibits authorized projects in wilderness areas.

Options to utilize mechanical treatments to manage vegetation would be precluded. Generally, the priority for restoration treatments occurs within the wildland urban interface (WUI) or within the dry and mesic forest groups. Because WUI represents nearly three quarters of the potential wilderness area, the prohibition on restorative treatments is a concern. The concern increases in recognizing that dry forest represents nearly 80 percent of the area.

Timber Harvest Suitability

The underlying criteria for determining timber harvest suitability are found in the Forest and Rangeland Renewable Resources Planning Act of 1974, 36CFR219.12, and Forest Service Handbook 1909.12, Chapter 60.

For the Colville and Okanogan-Wenatchee National Forests, the general criteria for timber suitability that will be used for timber harvest suitability are:

- Is it forest land (10 percent crown cover minimum, productivity >20 ft³/ac/yr).
- The area has not been withdrawn from timber harvest or production.
- Soil, slope, or other watershed conditions will not be irreversibly damaged (based on soil attributes for erosion, instability, or compaction potential, slopes >65 percent, and certain land types)
- Reforestation can be assured within five years (lack of shallow soils, low frost heave potential, low surface rock, plant community type, certain land types, and elevation <5,500 feet)
- Economic and technologic viability (< 0.5 miles from existing transportation system, species value or condition, volume availability, logging systems)

In consideration of all the criteria for determining timber harvest or timber production suitability and not just the fact that harvestable species can grow at a specific location, it appears this PWA does not have conditions that pass all the criteria. The main criterion for failure is that unacceptable resource impacts would likely occur due to road construction activities. This does not preclude helicopter operations that could fly material over

sensitive areas to adjacent road systems. However, in most if not all cases helicopter logging and the associated expenses (such as manual slash treatments) would not be an economically viable option.

Table 5--Stand data percentages

Suitable for Timber Harvest	Forest Groups		WUI	
0%	Parkland	0%	Total WUI	72%
	Cold Dry	0%	WUI in Dry and Mesic Forest	77%
	Cold Moist	21%		
	Mesic	0%		
	Dry	74%		
	Non-forest	5%		

Fire

The area has experienced at least 20 lightning-caused fires since 1945. This area lies adjacent to private land, where there is high risk from human-caused fires. It is cooperatively protected by the Washington State Department of Natural Resources and the Forest Service under a reciprocal fire agreement. Fire exclusion has caused dense stand conditions on many sites. Accumulations of fuel above historic conditions and overstocked conditions are increasing fire hazard within the PWA. Due to the area's small size, wildland fire use is not a viable strategy.

Insects and Disease

The Wilderness Act of 1964 allows for the control of insects and disease, but taking such actions in wilderness is rare. Forest Service wilderness policy (Forest Service Manual 2324.11) directs the agency "to allow indigenous insect and plant diseases to play, as nearly as possible their natural ecological role". Policy also directs the agency to "protect the scientific value of observing the effect of insects and disease on ecosystems and identifying genetically resistant plant species", and finally, "to control insect and plant disease epidemics that threaten adjacent lands or resources."

An aerial survey of this PWA was completed in 2007. The most extensive damaging agent detected was Douglas-fir beetle. Numerous small (from two to 40 acres) pockets were mapped, and one large (over 100 acres) pocket was mapped in upper Harvey Creek. Douglas-fir beetles commonly breed in blow-down Douglas-fir or in Douglas-firs that have been severely stressed by root disease, fire, heavy or repeated defoliation, or other damage. If substantial quantities of this breeding material are available the beetle population may build up to damaging levels, attacking and killing large, healthy Douglas-firs. Usually trees are killed in groups of five to 20, but group kills can become much larger during outbreaks. Removing Douglas-fir blowdown where possible can reduce tree-killing by these beetles. In 1997, Douglas-fir beetles built up high populations in Douglas-firs that were damaged during a winter storm which affected the Idaho Panhandle, the Colville National Forest, and the northeastern portion of the Okanogan National Forest. Many Douglas-firs were killed by beetles in 1998 and in subsequent years.

One large pocket of fir engraver damage was mapped in Harvey Creek, in the same area where Douglas-fir beetle was mapped. The other was in a tributary of Emanuel Creek. Fir engravers are bark beetles that attack true firs, most commonly grand fir and white fir. Fir engraver activity is often associated with root disease. They are also attracted to trees under stress from drought, defoliation or other damage. Trees that are attacked may be killed outright, or they may survive with topkill. The most effective management technique for reducing damage by fir engravers is to select against grand fir and white fir during intermediate treatments.

Threatened, Endangered, and Sensitive Plant Species

There are no known endangered, threatened, proposed or sensitive plant species in the area that are on current federal, state heritage or Forest Service lists.

Noxious Weeds

Musk thistle, a noxious weed, is established on seven acres in three locations within the PWA.

Minerals and Soils

Soils are derived from weathered andesite, glacial till, volcanic ash and loess. Areas of coarse textured soils may be intermixed with areas of fine textured soils. Bedrock exposures with little or no soil development are common. Most soils are coarse textured, lack structure and have high, coarse fragment content. These characteristics, along with a general lack of horizon development, allow water to move freely through the soil profile. Soils generally have moderate to severe erosion hazards related to steepness of slope.

The Bodie Mountain PWA is primarily underlain by Eocene volcanic rocks. Almost the entire PWA has a high or moderate to high potential for the occurrence of gold and silver occurring in quartz-calcite veins and altered breccia zones (Grant, 1982). The part of the area on the Colville National Forest also has potential for the occurrence of copper, molybdenum, zinc, lead, and tungsten (Grant, 1982). There are no mines or prospects of significance within the Bodie Mountain PWA. However, the Bodie Mine located immediately west of the area did produce about \$300,000 worth of gold and silver from 1902 to 1944 (Moen, 1980). At present (6/2008), there are 6 active claims located in the southwest part of the area in T. 39 N., R. 31 E. Sections 35 and 36 due east of the historic Bodie Mine.

The area has not been the subject of expressions of interest, lease applications, or leases for coal, oil and gas, or geothermal resources. The area has no potential for the occurrence of coal and oil and gas resources and a low or unknown potential for geothermal resources.

Cultural and Heritage Resources

The Cultural Resource Overview of the Tonasket Planning Unit (Uebelacker, 1978) identified no evidence of cultural resources in the area.

Land Uses and Special Uses

The area has no authorized special land uses, other than active livestock term grazing permits.

Private Lands

The private land that borders the PWA is private farmland. There is no need to provide access to the private lands through the PWA. Management of the private lands would not be hindered, if the area were designated as wilderness.

NEED FOR WILDERNESS

Location and size of other wildernesses in the general vicinity, and distance from area and population centers:

The Bodie Mountain area is approximately 80 air miles west of the 41,335-acre Salmo-Priest Wilderness on the Colville National Forest, 50 air miles east of the 529,477-acre Pasayten Wilderness, and 90 air miles northeast of the 151,435 acre Lake Chelan-Sawtooth Wilderness. The Bodie Mountain PWA lies between the Salmo-Priest and the Pasayten Wilderness areas. These wilderness areas are closer to the major population centers of Spokane and Seattle than the Bodie Mountain area, which would be about a five hour drive.

A separate analysis identified where the PWAs could contribute to the wilderness recreation setting either by preserving the primitive recreation setting adjacent to existing wilderness, or by contributing assessable and attractive day use destinations (which are under heavy pressure in existing wilderness). The analysis also examined which PWAs would contribute either a unique landform to the wilderness system, or where trails access vegetation types that are underrepresented in wilderness at a regional scale.

In ranking this PWA for its potential to provide a high quality wilderness recreation setting it ranked as moderate. The Bodie Mountain PWA is in the Okanogan Highlands landform, which is underrepresented in wilderness, however there are better choices to consider in this landform on the Colville National Forest. The lack of system trails and the limited public access limits recreational use of this area.

Present visitor pressure on other wildernesses, trends, and changing patterns of use:

Overall, there is a continuous, slight increase in the number of people visiting nearby wilderness areas. The user groups showing the most increase are day-hikers and visitors to some off-trail destinations throughout the wildernesses, and horse users in the Lake Chelan-Sawtooth Wilderness. There is also a trend to shorter multiple-day trips.

Extent to which non-wilderness lands provide opportunities for unconfined outdoor recreation experiences:

The Colville and the Okanogan-Wenatchee National Forests provide large backcountry areas (that are not designated wilderness) within 100 miles of the Bodie Mountain PWA that provide quality opportunities for unconfined recreation. These include the Kettle

Mountain Range and the Long Draw and Long Swamp PWAs and others. These areas are currently managed for primitive to semi-primitive recreation opportunities.

The need to provide a sanctuary for those biotic species that have demonstrated an inability to survive in less than primitive surroundings or the need for a protected area for other unique scientific value or phenomena:

Wildlife

The Bodie Mountain area is too small to provide secure habitat or sanctuary for animals that need expansive primitive surroundings, and it lies outside of the North Cascades Grizzly Bear Recovery Zone and Selkirk Grizzly Bear Recovery Zone. Wide-ranging predators, such as grizzly bears, wolves, and wolverines, may not use the area long-term as habitat, although it does provide at least some connectivity between better habitats. The Bodie Lynx Analysis Unit lies partially within this potential wilderness area. For American marten (*Martes americana*), grizzly bear (*Ursus arctos*), wolverine (*Gulo gulo*), and Canada lynx (*Lynx canadensis*) the wildlife sustainability index is 3.4 (a low relative ranking) and the habitat connectivity index is 7.9 (also low relative ranking) for the Bodie Mountain PWA.

Fish

Several native species in the interior Columbia River Basin have demonstrated an inability to survive in less than primitive surroundings, especially the bull trout. In addition to habitat changes on National Forest System lands, other factors off forest such as hydropower generation, hatchery programs, harvest, and changing ocean conditions further challenge the persistence of some far-ranging native species. Broad-scale assessments have demonstrated a positive correlation between unroaded areas and persisting native fish stocks. Often, assessments like these don't differentiate between wilderness and roadless areas; rather they combine the two into an "unroaded" category. These assessments show current strongholds (most secure and robust populations) are dependant on wilderness and roadless areas. Some of the more resilient native fish populations in the Interior Columbia Basin are located in unroaded areas on National Forest System lands.

For the Okanogan-Wenatchee National Forest PWAs were assigned an aquatic ranking based on federally listed and sensitive fish species that are sensitive to human disturbances. A high ranking was assigned when listed fish species occur in the PWA or when ecological process including high quality water help sustain listed fish species downstream of the PWA. All other PWAs are ranked low. This PWA is assigned a low ranking based on these factors.

Rare Plants

An analysis was completed to prioritize which PWAs would contribute the most to providing refugia for those plant species on the species of interest/species of concern (SOI/SOC) list. The analysis ranked three factors. The first factor, the total number of sites occurring within the PWA, ranked as low for this PWA. The second factor, which also ranked as low for this PWA, examined the degree of rarity of any SOI/SOC species

present, and also recognized the importance of individual PWAs in supporting a high incidence of populations relative to Washington State as a whole.

PWAs are generally unsurveyed for rare plants due to a relative lack of projects occurring in these areas. Thus an additional factor examined the potential for the PWA to support SOI/SOC species. Based on databases, first the SOI/SOC plant species were identified that are present within a five-mile radius of the PWA, but are not known to occur within the PWA. Then the PWA was analyzed to see if the potential habitat for these species occurs within the PWA. Based on this analysis, this PWA ranks as moderate.

Finally, a composite score was assigned to each PWA based on combining each of the rankings described above. This PWA ranks overall as moderate priority for preserving rare plant refugia with a wilderness designation.

Ability to provide for preservation of identifiable landform types and ecosystems:

Using Bailey's Ecoregion Classification system, this area is classified into the Okanogan Highlands Ecoregion. Wilderness lands are under-represented in the Okanogan Highlands Ecoregion.

An analysis compared vegetative cover types that are under-represented in wilderness on the National Forest System in Region 6 with those same cover types present in the PWA. Large-scale cover types were available through existing data layers and represent approximately 25 percent of the vegetative cover of this PWA (approximately 2,100 acres). These types include forb lands, non-alpine meadows, and ponderosa pine. Taken as a whole, the contribution of underrepresented vegetation types ranks as high for the portion of this area with underrepresented cover types, but only as moderate for the number of acres that are represented within this PWA relative to the other PWAs in the planning area.

Some under-represented cover types fill microhabitats such as riparian areas or perched water tables. Such finer scale cover types well-represented in this PWA include aspen. Sparse amounts of cottonwood may also be found.

In particular, the forb lands and aspen cover types would make a significant contribution within the eastern Washington planning area.